FIG.1

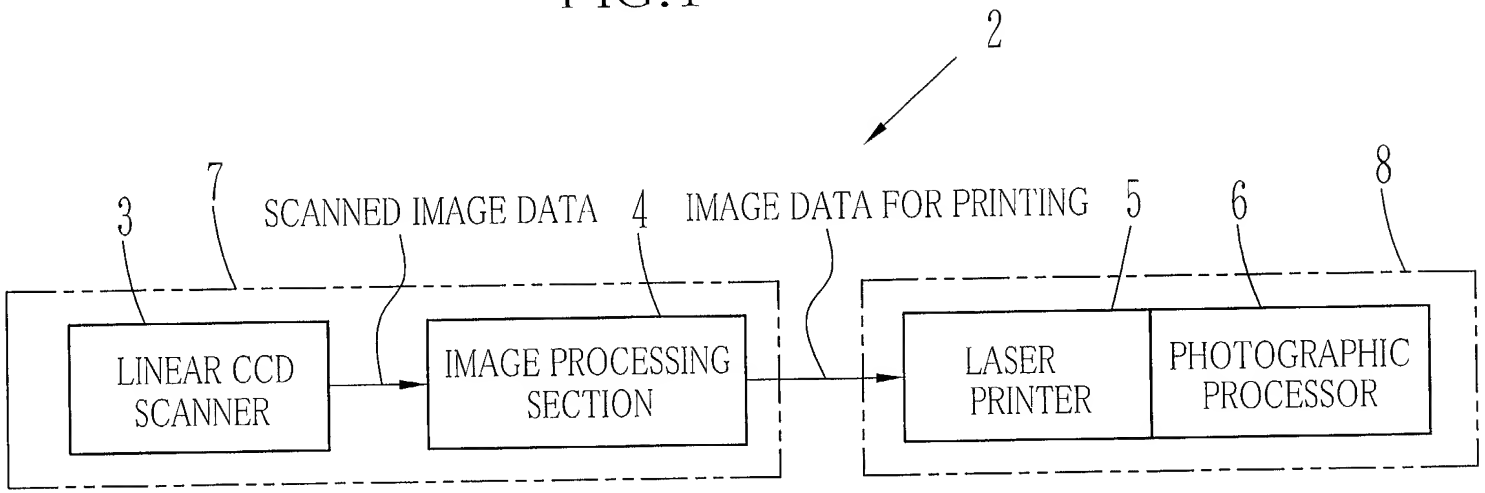
2
3
7
SCANNED IMAGE DATA
4
IMAGE DATA FOR PRINTING
5
6
8
LINEAR CCD SCANNER
IMAGE PROCESSING SECTION
LASER PRINTER
PHOTOGRAPHIC PROCESSOR

FIG.2

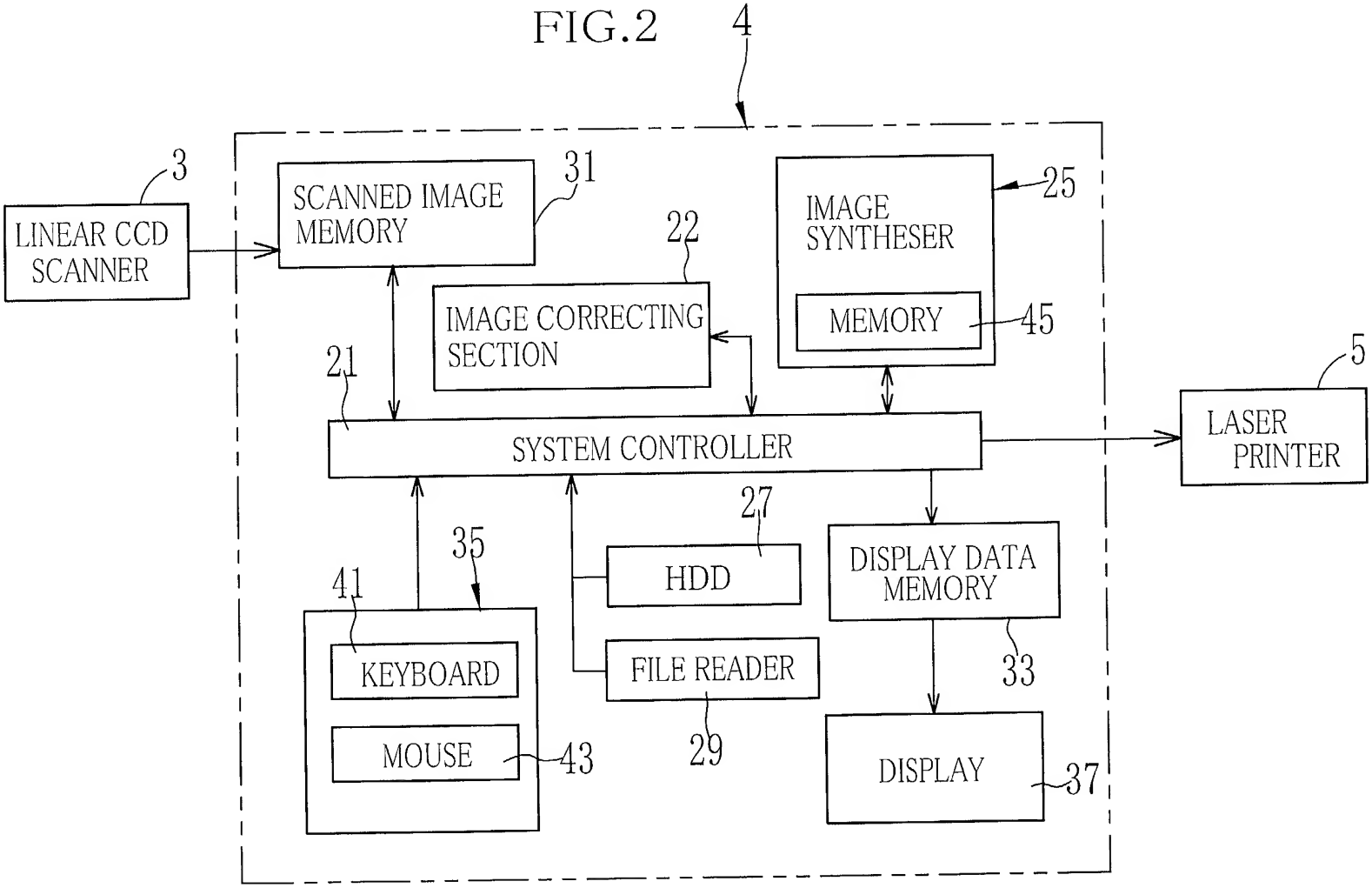
4
3
LINEAR CCD SCANNER
SCANNED IMAGE MEMORY
31
22
IMAGE CORRECTING SECTION
IMAGE SYNTHESER
25
MEMORY
45
21
5
LASER PRINTER
SYSTEM CONTROLLER
27
HDD
35
41
KEYBOARD
MOUSE
43
FILE READER
29
DISPLAY DATA MEMORY
33
DISPLAY
37

FIG.3

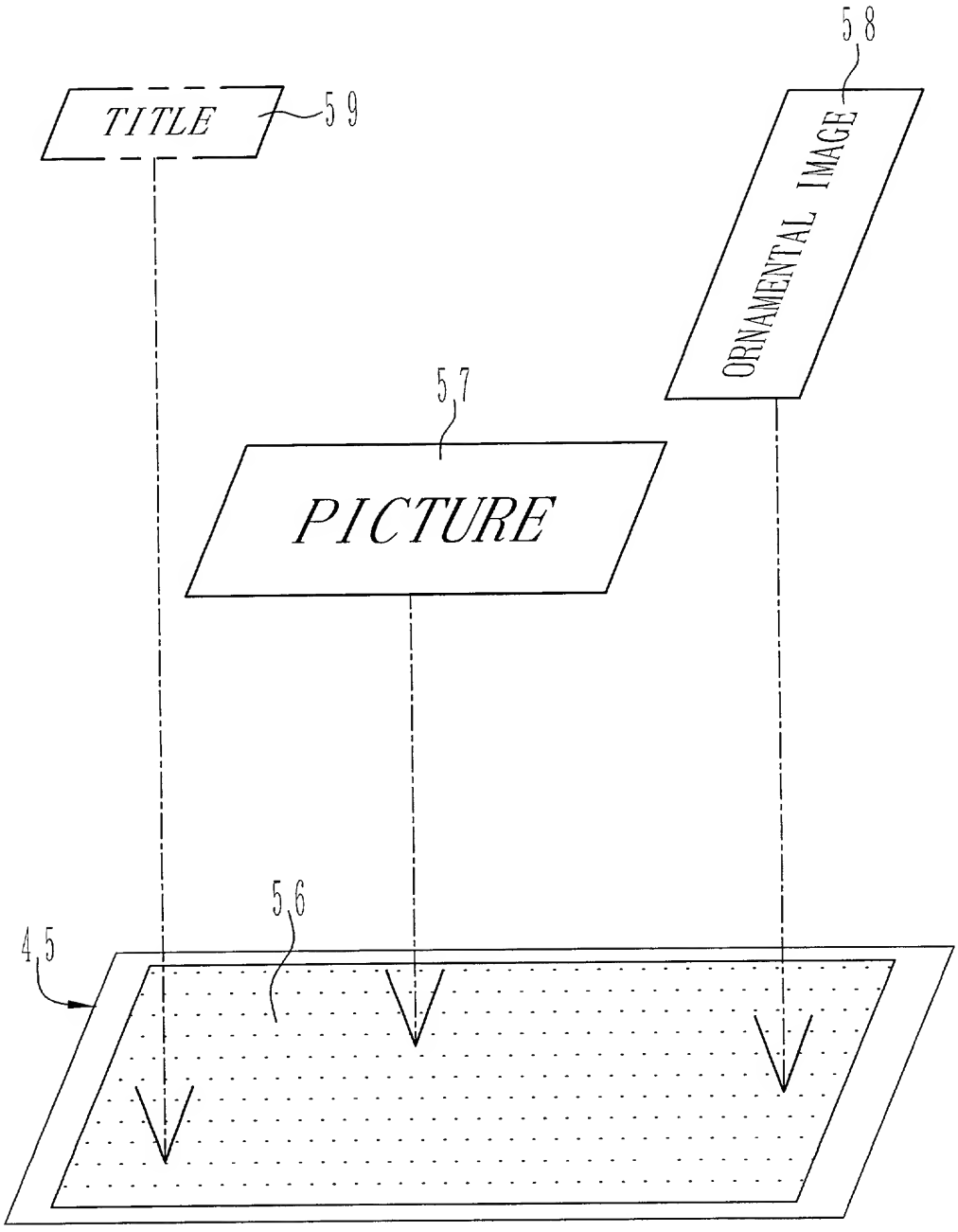

FIG.4

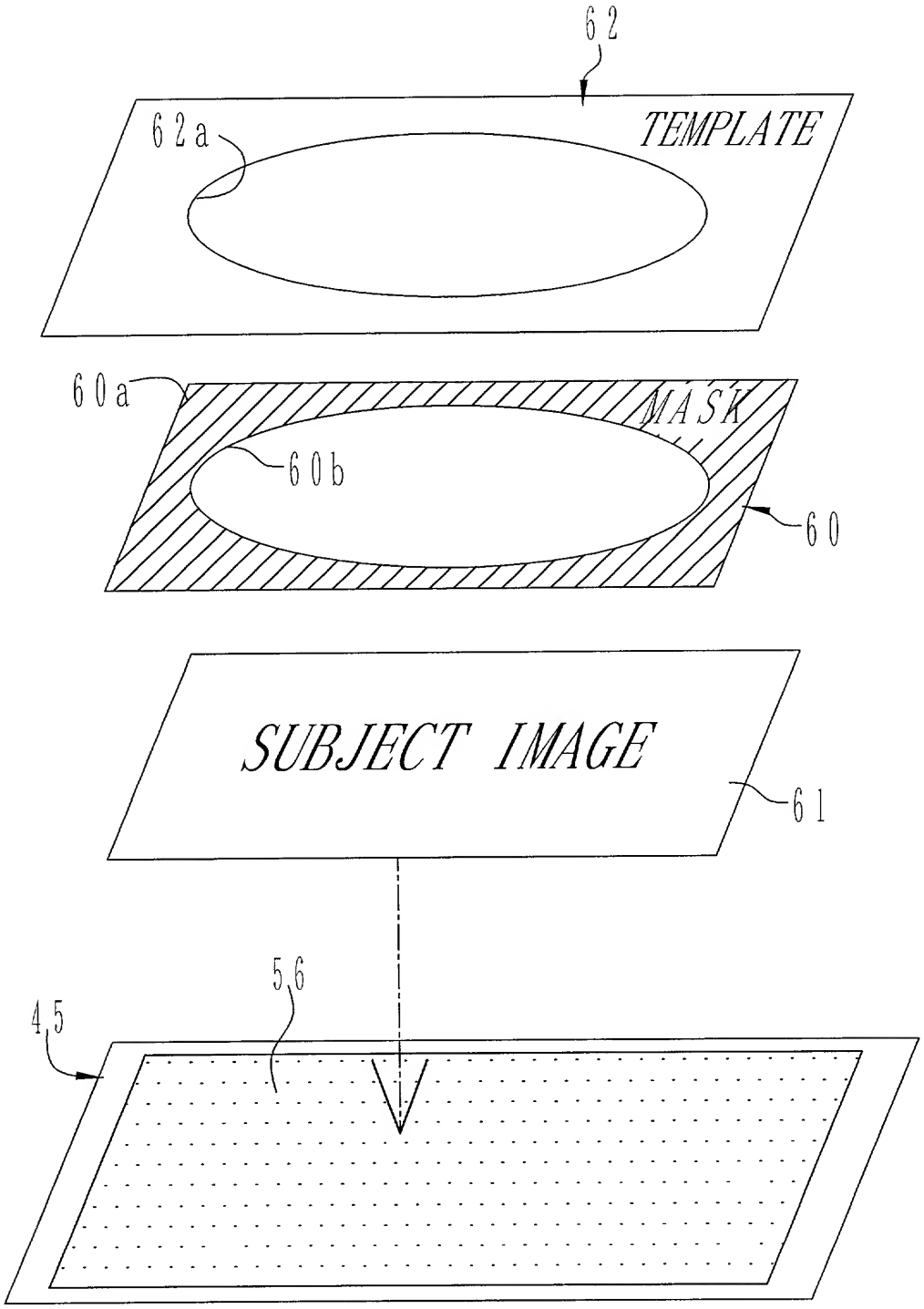

FIG.5

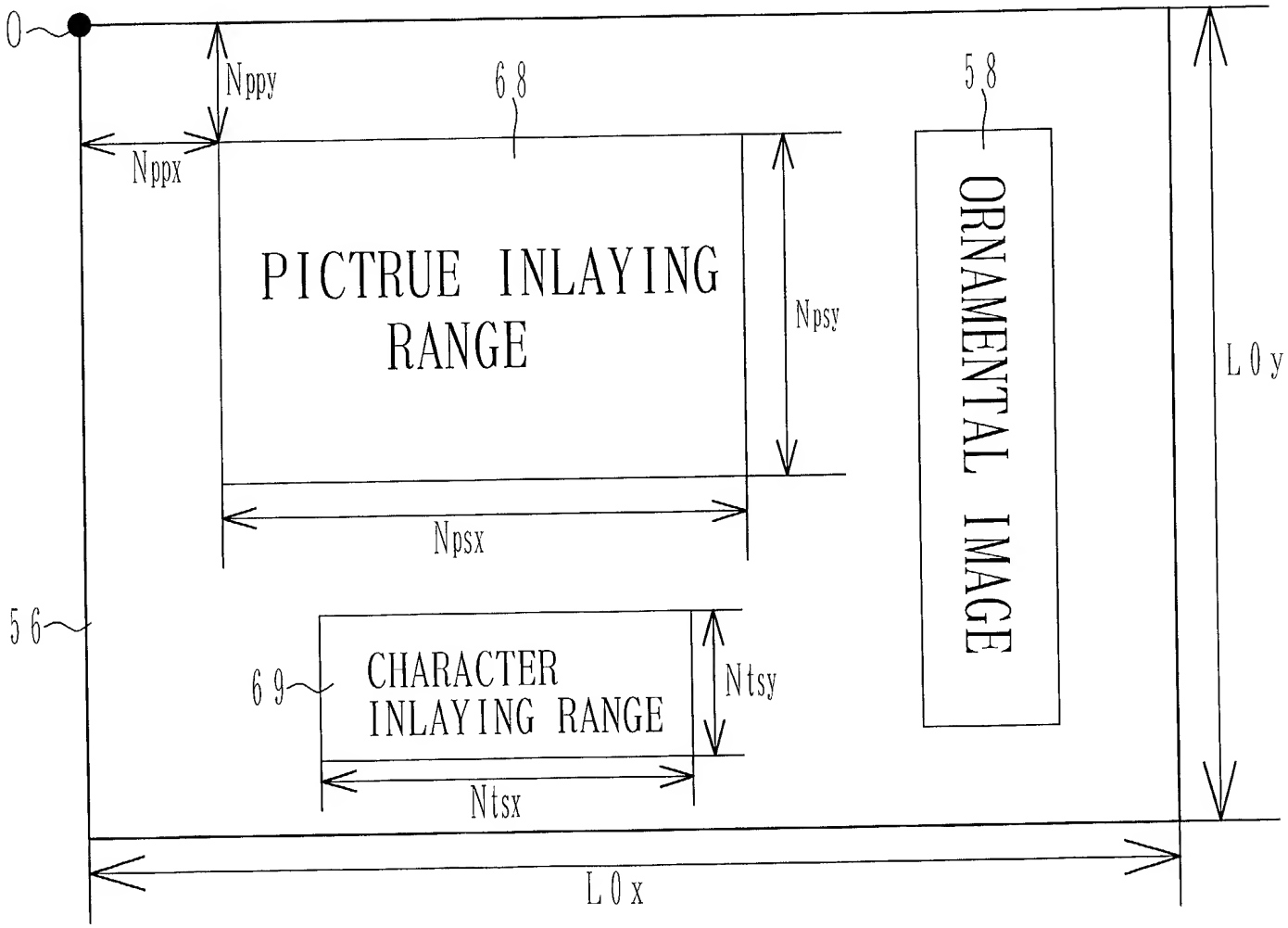
O
Nppy
Nppx
68
PICTRUE INLAYING RANGE
Npsy
Npsx
58
ORNAMENTAL IMAGE
L0y
56
69
CHARACTER INLAYING RANGE
Ntsy
Ntsx
L0x

FIG.6

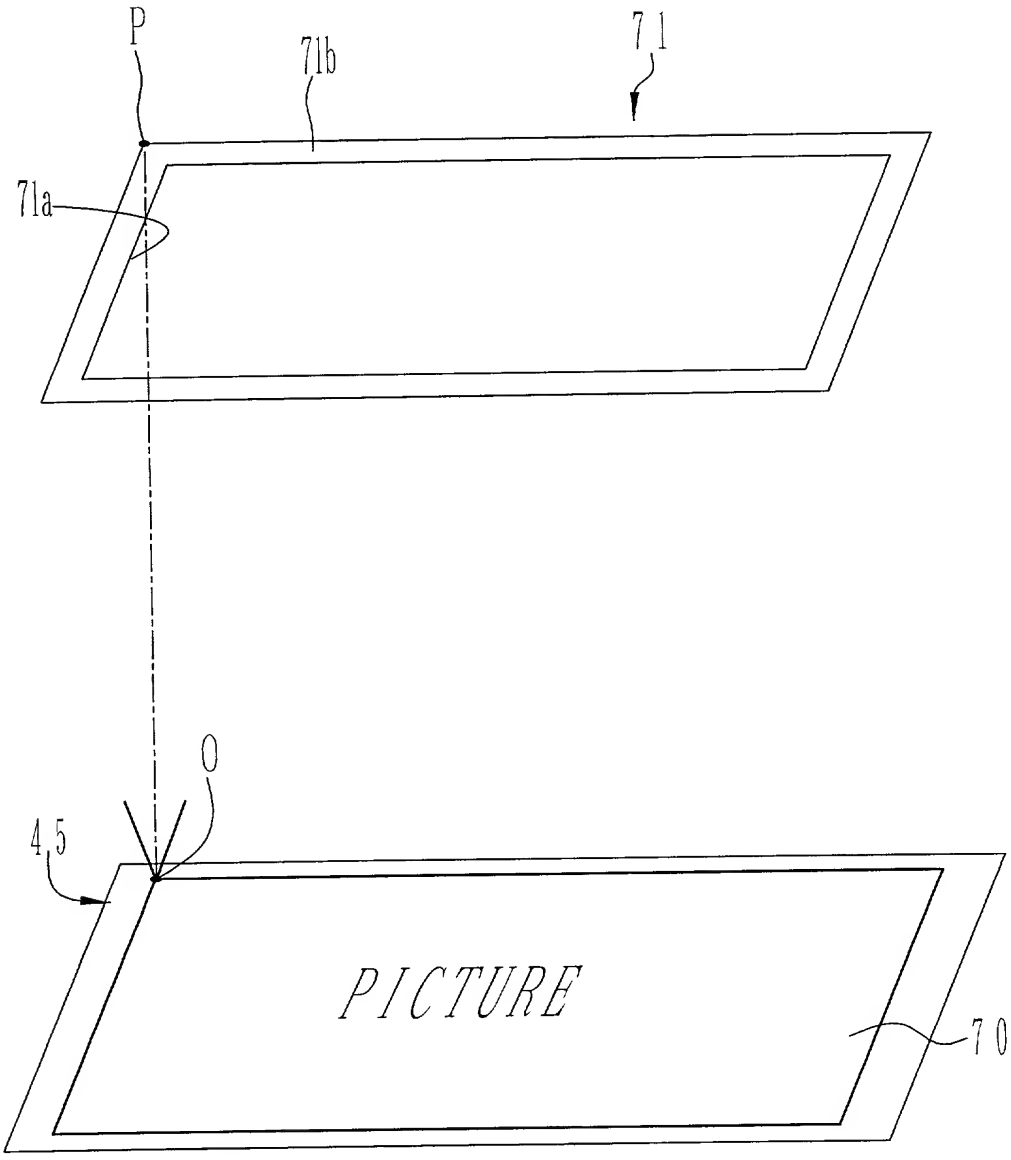

FIG.7

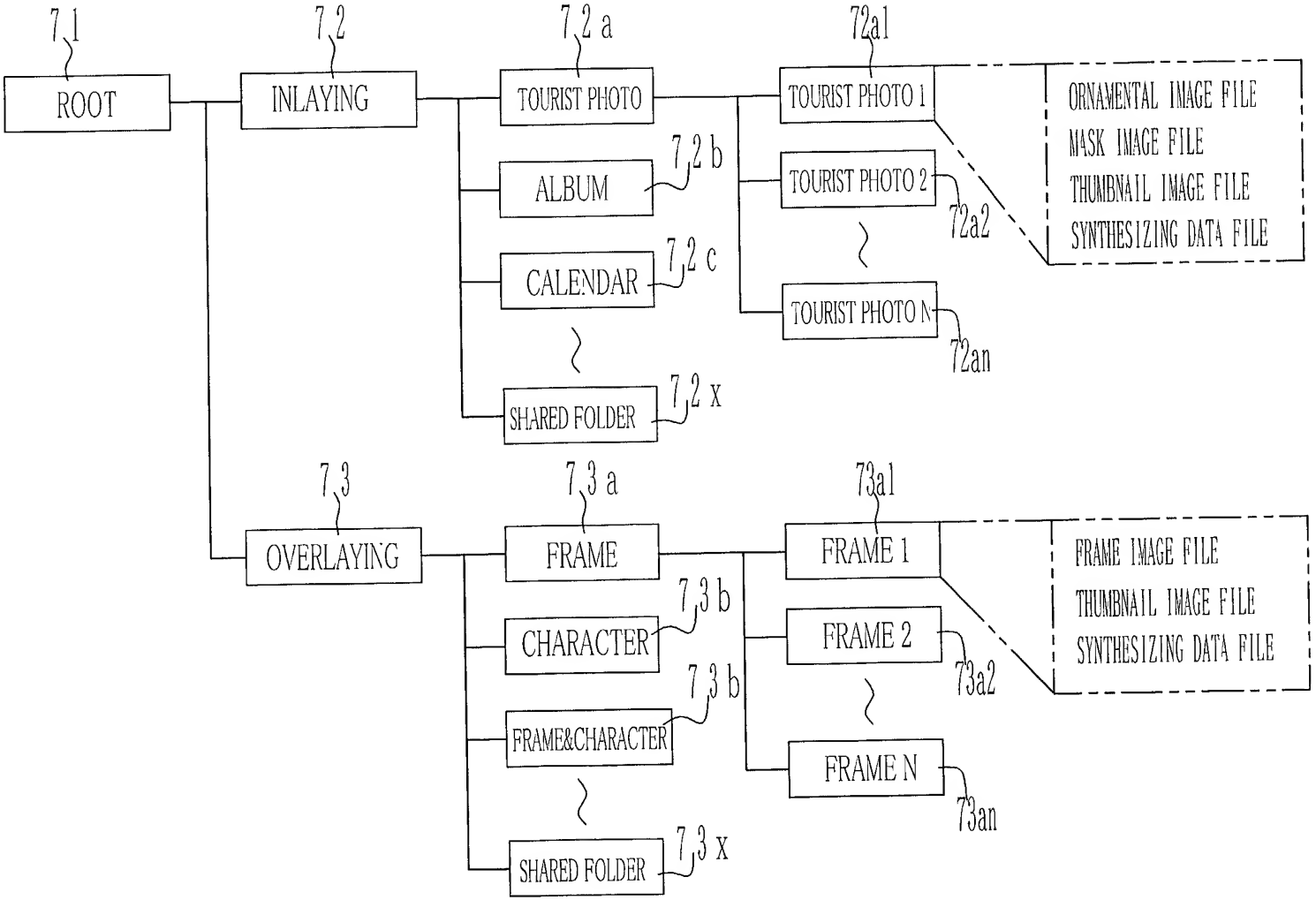
7 1
ROOT
7 2
INLAYING
7 2 a
TOURIST PHOTO
7 2 b
ALBUM
7 2 c
CALENDAR
7 2 x
SHARED FOLDER
72a1
TOURIST PHOTO 1
TOURIST PHOTO 2
72a2
TOURIST PHOTO N
72an
ORNAMENTAL IMAGE FILE
MASK IMAGE FILE
THUMBNAIL IMAGE FILE
SYNTHESIZING DATA FILE
7 3
OVERLAYING
7 3 a
FRAME
7 3 b
CHARACTER
7 3 b
FRAME&CHARACTER
7 3 x
SHARED FOLDER
73a1
FRAME 1
FRAME 2
73a2
FRAME N
73an
FRAME IMAGE FILE
THUMBNAIL IMAGE FILE
SYNTHESIZING DATA FILE

FIG.8

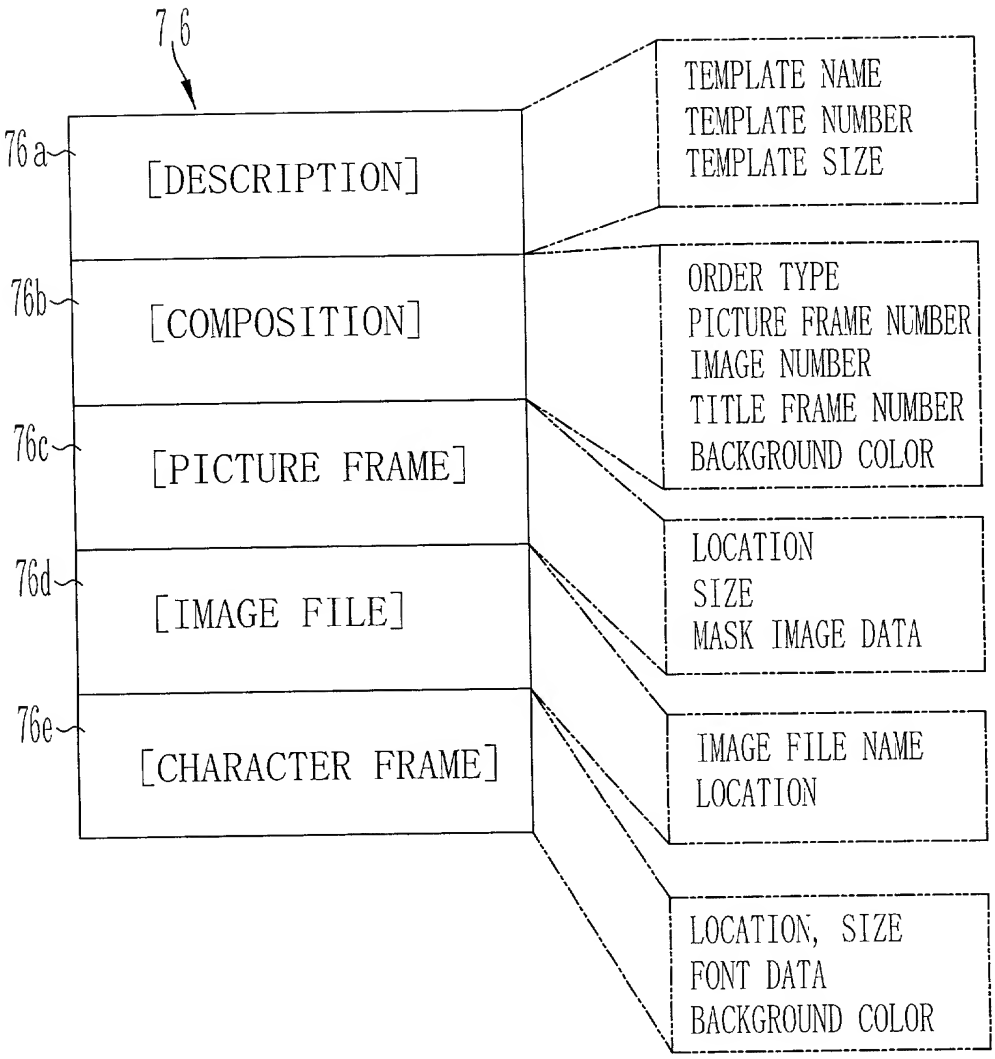
76
76a
[DESCRIPTION]
TEMPLATE NAME
TEMPLATE NUMBER
TEMPLATE SIZE
76b
[COMPOSITION]
ORDER TYPE
PICTURE FRAME NUMBER
IMAGE NUMBER
TITLE FRAME NUMBER
BACKGROUND COLOR
76c
[PICTURE FRAME]
LOCATION
SIZE
MASK IMAGE DATA
76d
[IMAGE FILE]
IMAGE FILE NAME
LOCATION
76e
[CHARACTER FRAME]
LOCATION, SIZE
FONT DATA
BACKGROUND COLOR

FIG.10

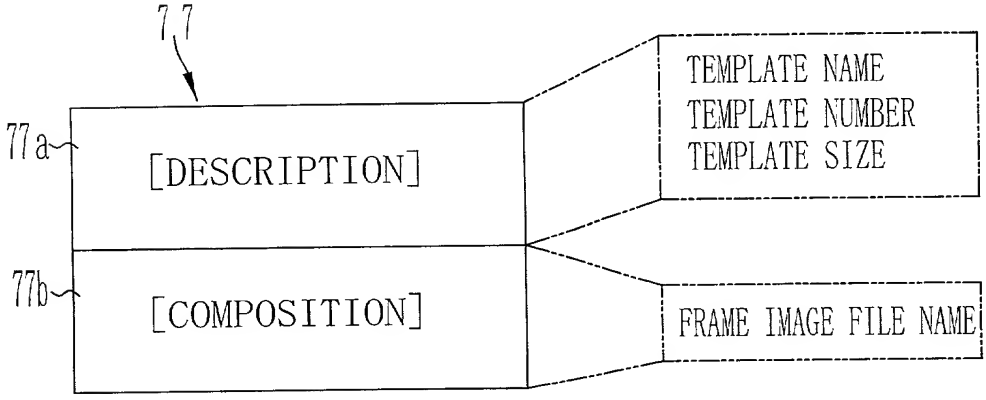
77
77a
[DESCRIPTION]
TEMPLATE NAME
TEMPLATE NUMBER
TEMPLATE SIZE
77b
[COMPOSITION]
FRAME IMAGE FILE NAME

FIG.9

```
[DESCRIPTION]
  TEMPLATE_NAME="TOURIST PHOTO 1"
  TEMPLATE_NUMBER=KK-001-L
  GROUP=" TOURIST PHOTOGRAPHY"
  TEMPLATE_SIZE=1270, 890
  THUMBNAIL_FILE=KK-001-L-TM.BMP

[COMPOSITION]
  TEMPLATE_TYPE=0
  INLAYING SEQUENCE_TYPE=0
  PICTURE FRAME_NUMBER=1
  IMAGE_NUMBER=1
  CHARACTER FRAME_NUMBER=1
  BACKGROUND_COLOR=255,255,255

[PICTURE_FRAME 1]
  PICTURE FRAME_ADDRESS=118,88
  PICTURE FRAME_SIZE=590,322
  MASK_FILE=KK-001-L-M.pcx

[IMAGE 1]
  IMAGE_FILE=KK-001-L-D.pcx
  IMAGE_ADDRESS=767,88

[CHARACTER_FRAME 1]
  CHARACTER FRAME_ADDRESS=118,500
  CHARACTER FRAME_SIZE=590,100
  FONT_SIZE=20
  FONT_COLOR=0,0,0
  BACKGROUND_COLOR=255,255,120
  BACKCLEAR=1
```

EP 0 905 657 A2

FIG.11

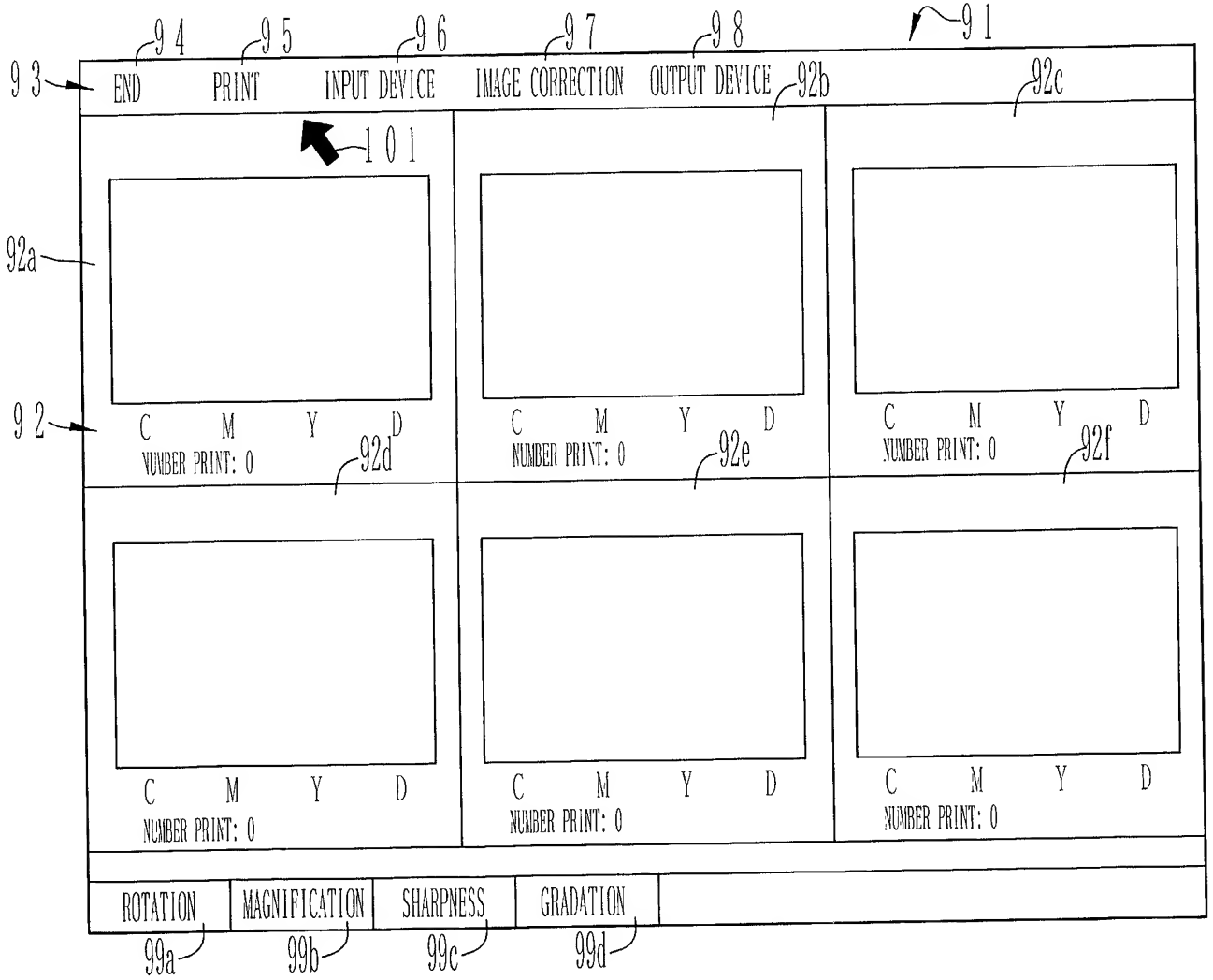
94
95
96
97
98
91
93
END
PRINT
INPUT DEVICE
IMAGE CORRECTION
OUTPUT DEVICE
92b
92c
101
92a
92
C M Y D
NUMBER PRINT: 0
92d
92e
92f
ROTATION
MAGNIFICATION
SHARPNESS
GRADATION
99a
99b
99c
99d

FIG.12A

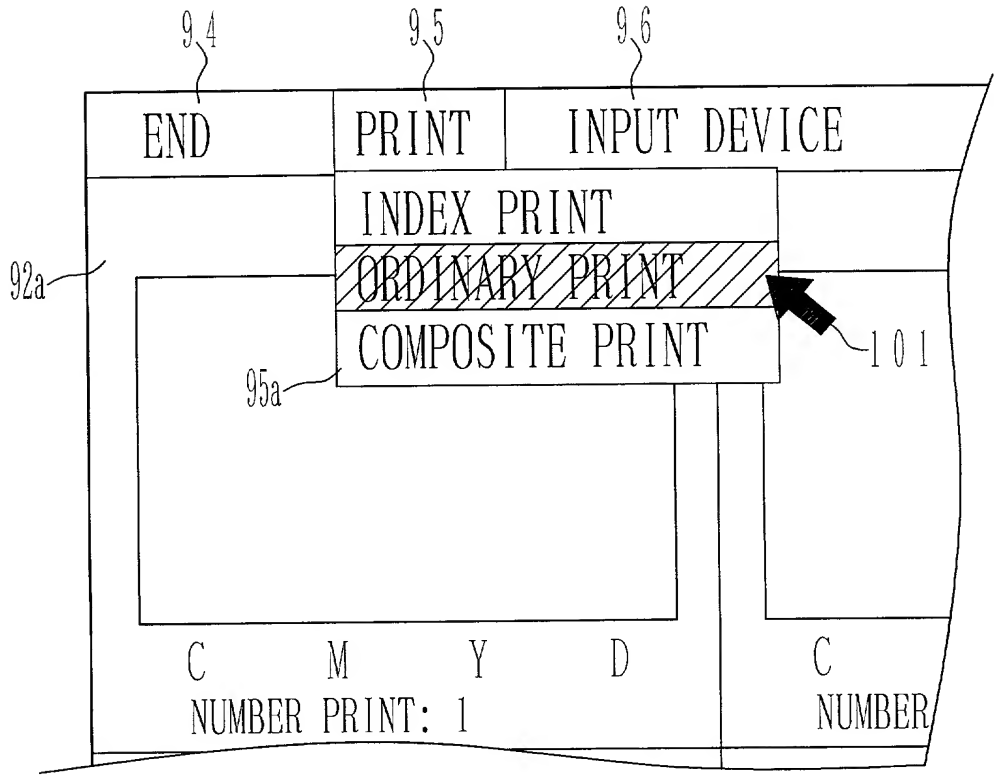

FIG.12B

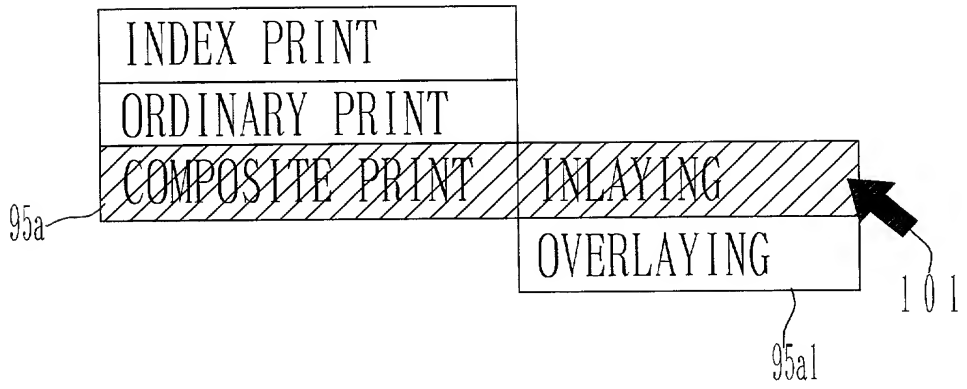

FIG.13

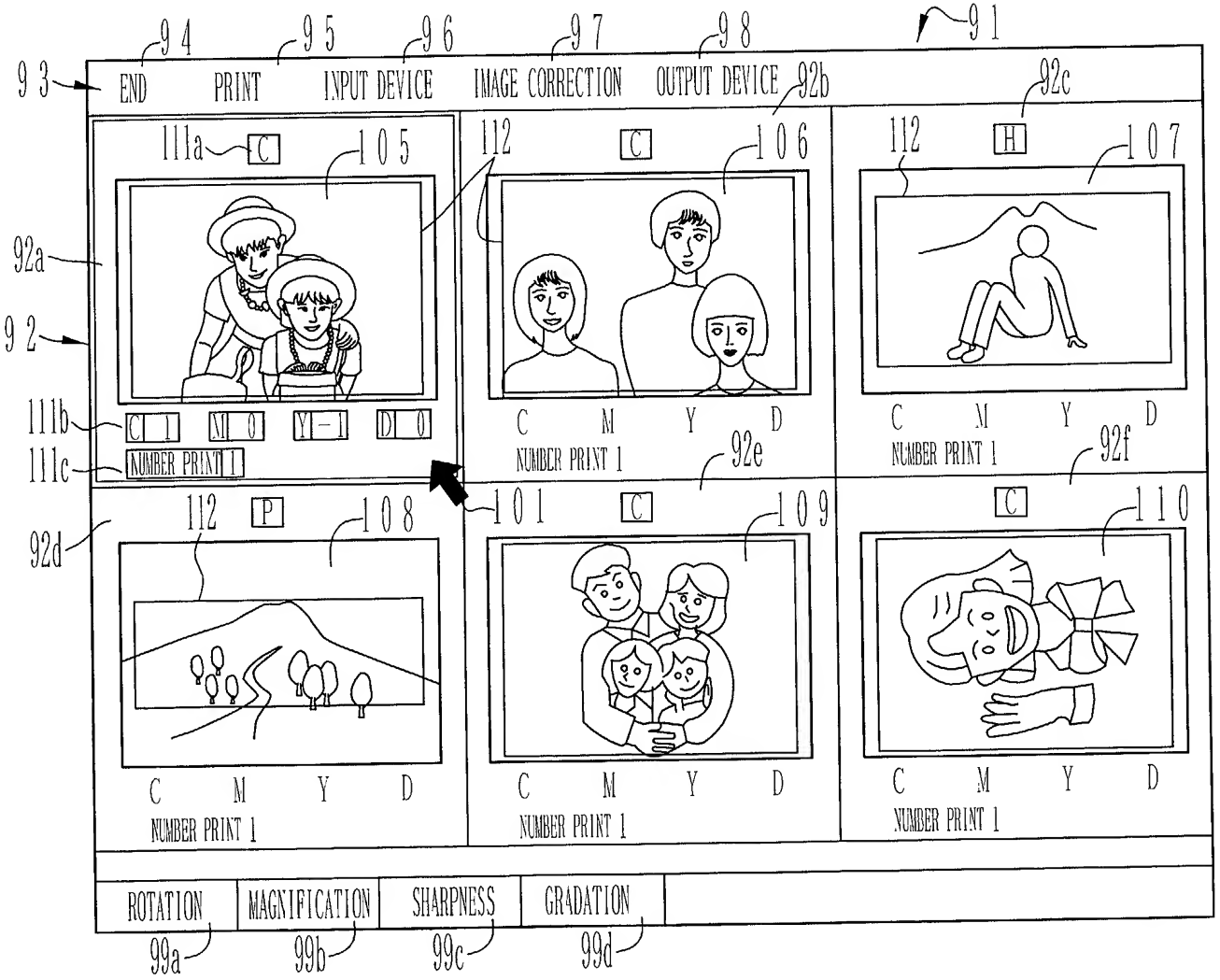
94
95
96
97
98
91
93
END
PRINT
INPUT DEVICE
IMAGE CORRECTION
OUTPUT DEVICE
92b
92c
111a
C
105
112
C
106
112
H
107
92a
92
111b
C 1
M 0
Y -1
D 0
C M Y D
NUMBER PRINT 1
111c
NUMBER PRINT 1
C M Y D
NUMBER PRINT 1
92e
92f
92d
112
P
108
101
C
109
C
110
C M Y D
NUMBER PRINT 1
C M Y D
NUMBER PRINT 1
C M Y D
NUMBER PRINT 1
ROTATION
MAGNIFICATION
SHARPNESS
GRADATION
99a
99b
99c
99d

FIG.14

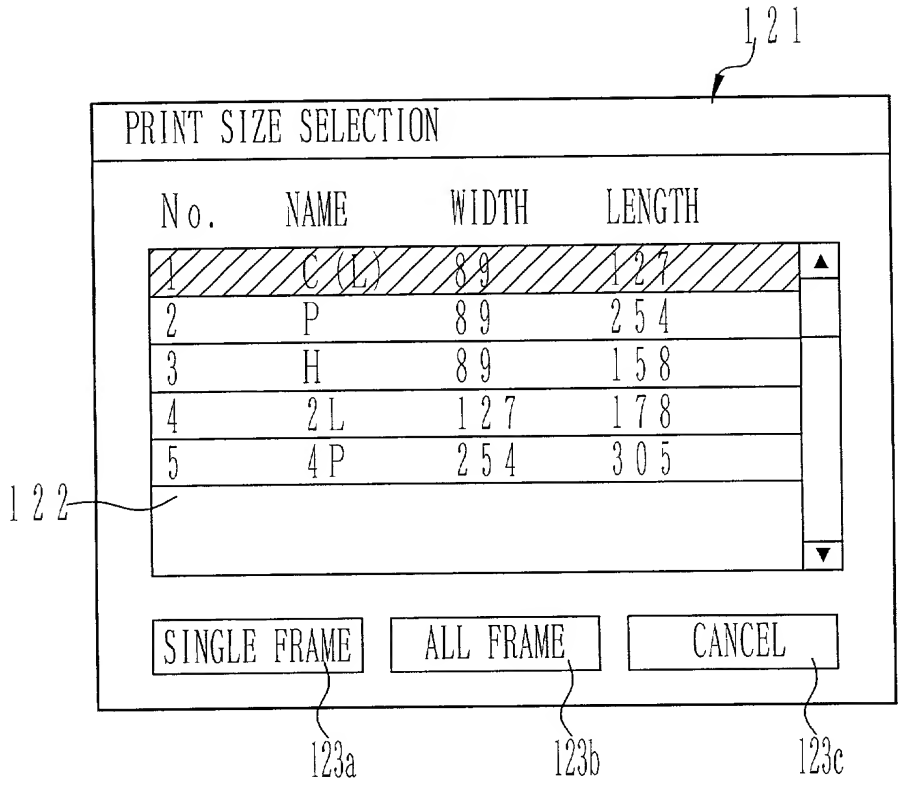
121
PRINT SIZE SELECTION
No.
NAME
WIDTH
LENGTH
1 C(L) 89 127
2 P 89 254
3 H 89 158
4 2L 127 178
5 4P 254 305
122
SINGLE FRAME
ALL FRAME
CANCEL
123a
123b
123c

FIG.15

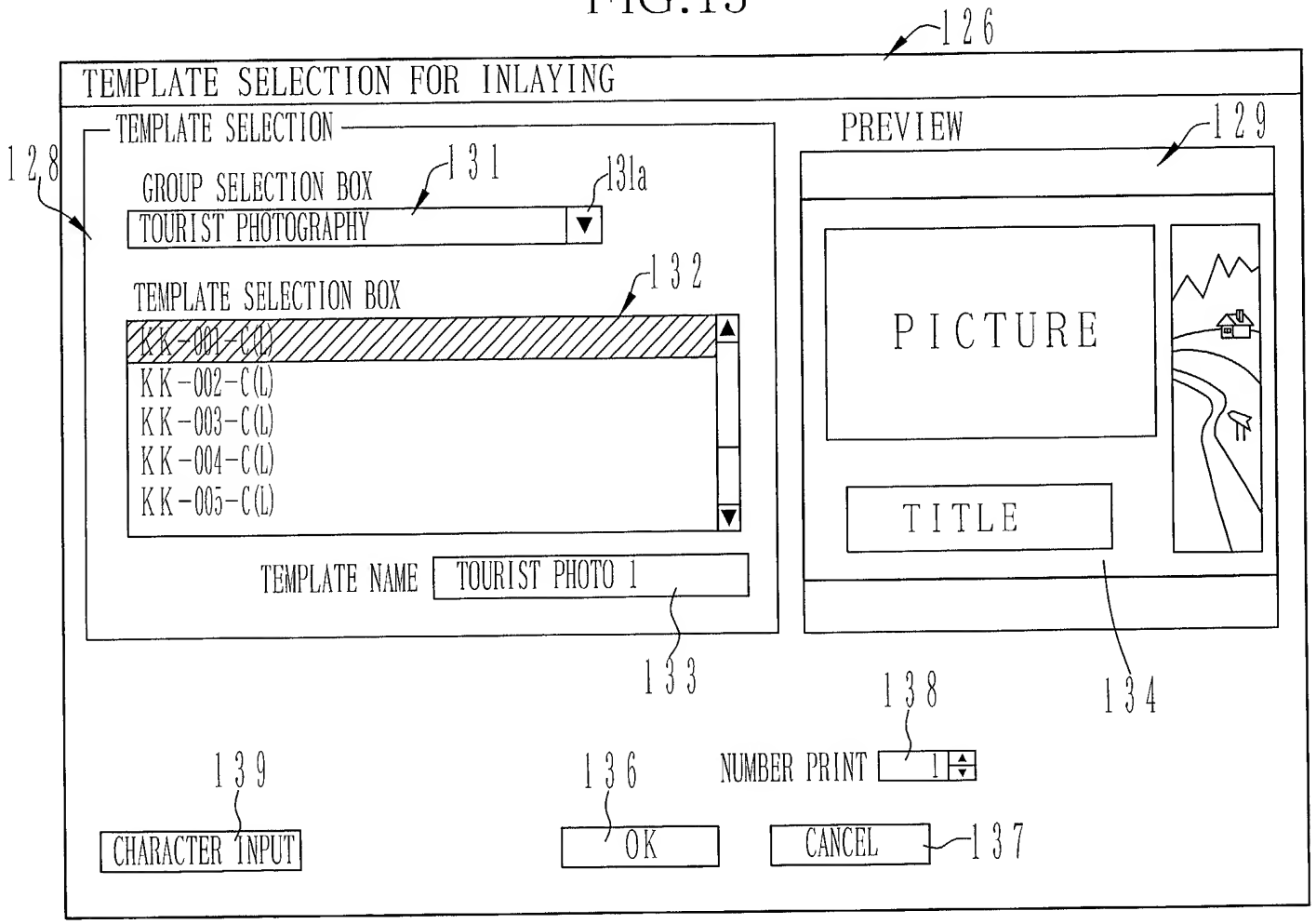
126
TEMPLATE SELECTION FOR INLAYING
TEMPLATE SELECTION
128
GROUP SELECTION BOX
131
131a
TOURIST PHOTOGRAPHY
TEMPLATE SELECTION BOX
132
KK-001-C(L)
KK-002-C(L)
KK-003-C(L)
KK-004-C(L)
KK-005-C(L)
TEMPLATE NAME
TOURIST PHOTO 1
133
PREVIEW
129
PICTURE
TITLE
134
138
NUMBER PRINT
1
139
CHARACTER INPUT
136
OK
CANCEL
137

FIG.16

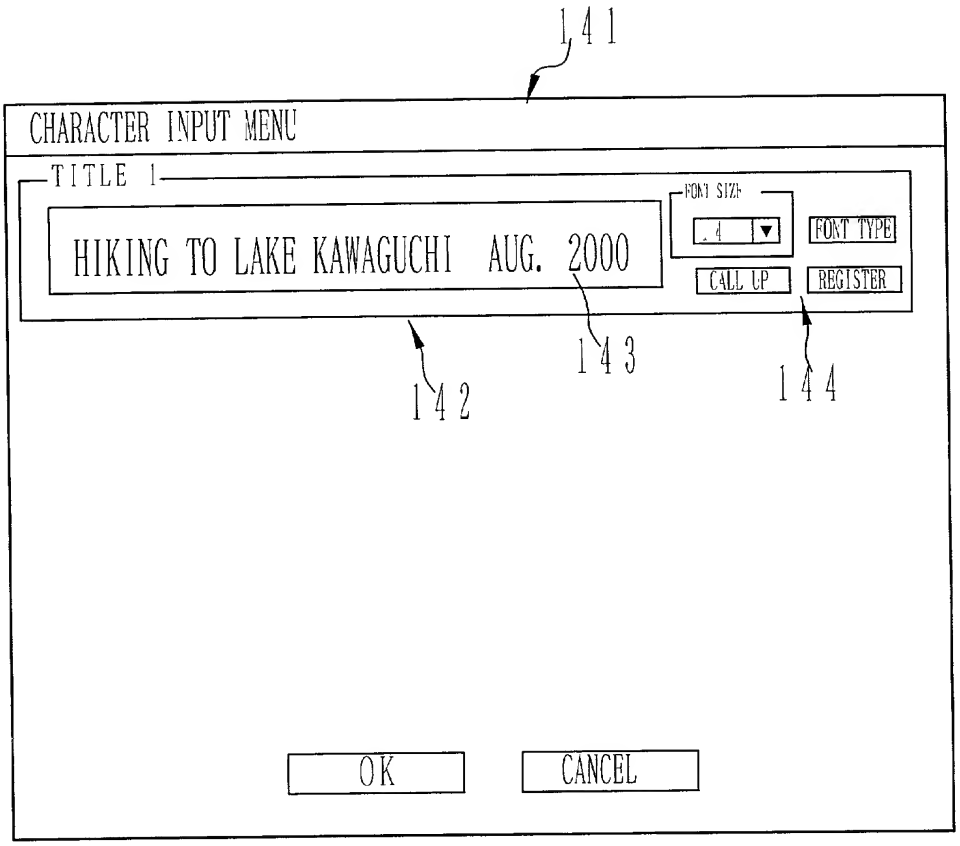
141
CHARACTER INPUT MENU
TITLE 1
HIKING TO LAKE KAWAGUCHI AUG. 2000
FONT SIZE
4
FONT TYPE
CALL UP
REGISTER
142
143
144
OK
CANCEL

FIG.17

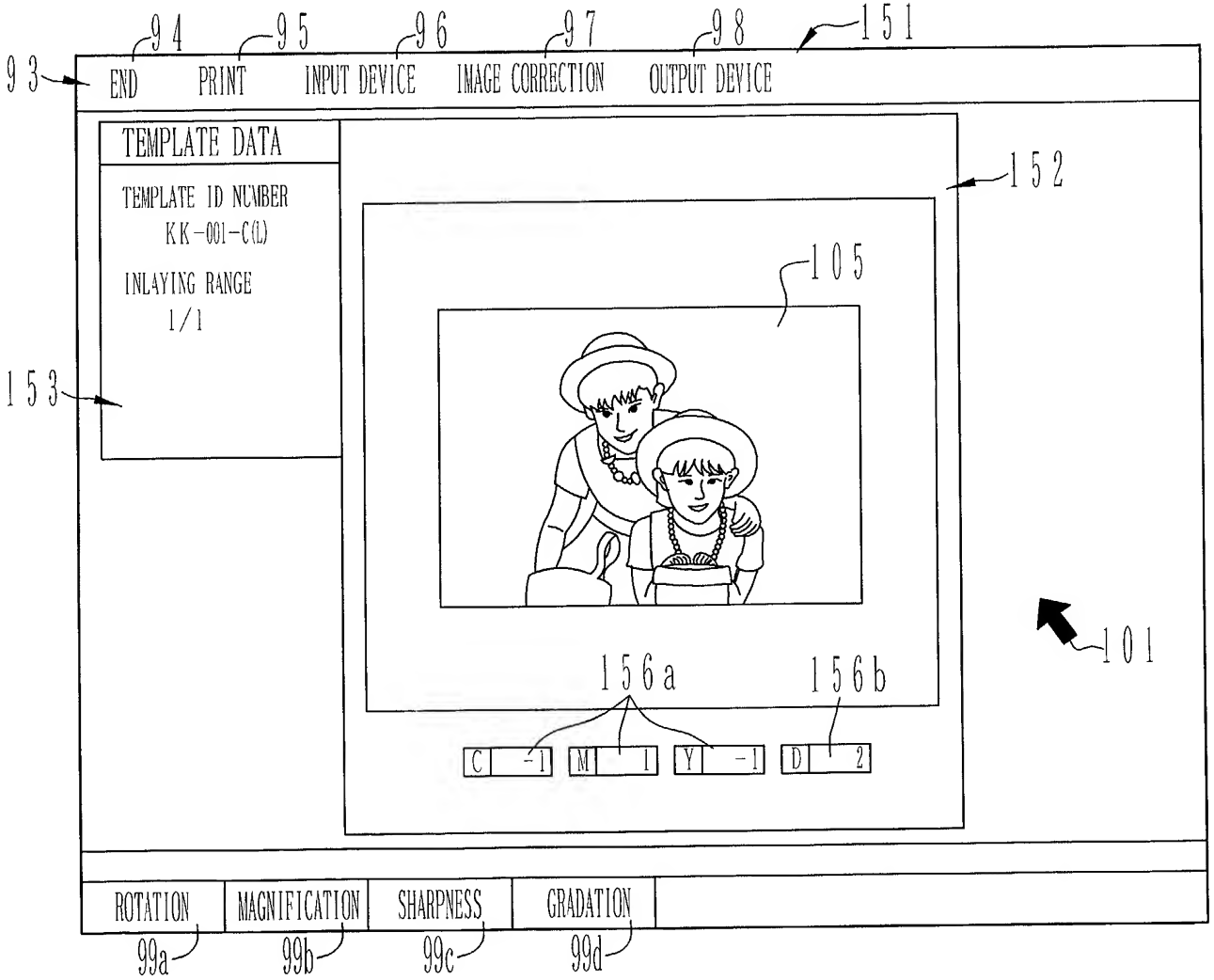
94
95
96
97
98
151
93
END
PRINT
INPUT DEVICE
IMAGE CORRECTION
OUTPUT DEVICE
TEMPLATE DATA
TEMPLATE ID NUMBER
KK-001-C(L)
INLAYING RANGE
1/1
153
152
105
101
156a
156b
C -1
M 1
Y -1
D 2
ROTATION
MAGNIFICATION
SHARPNESS
GRADATION
99a
99b
99c
99d

FIG.18

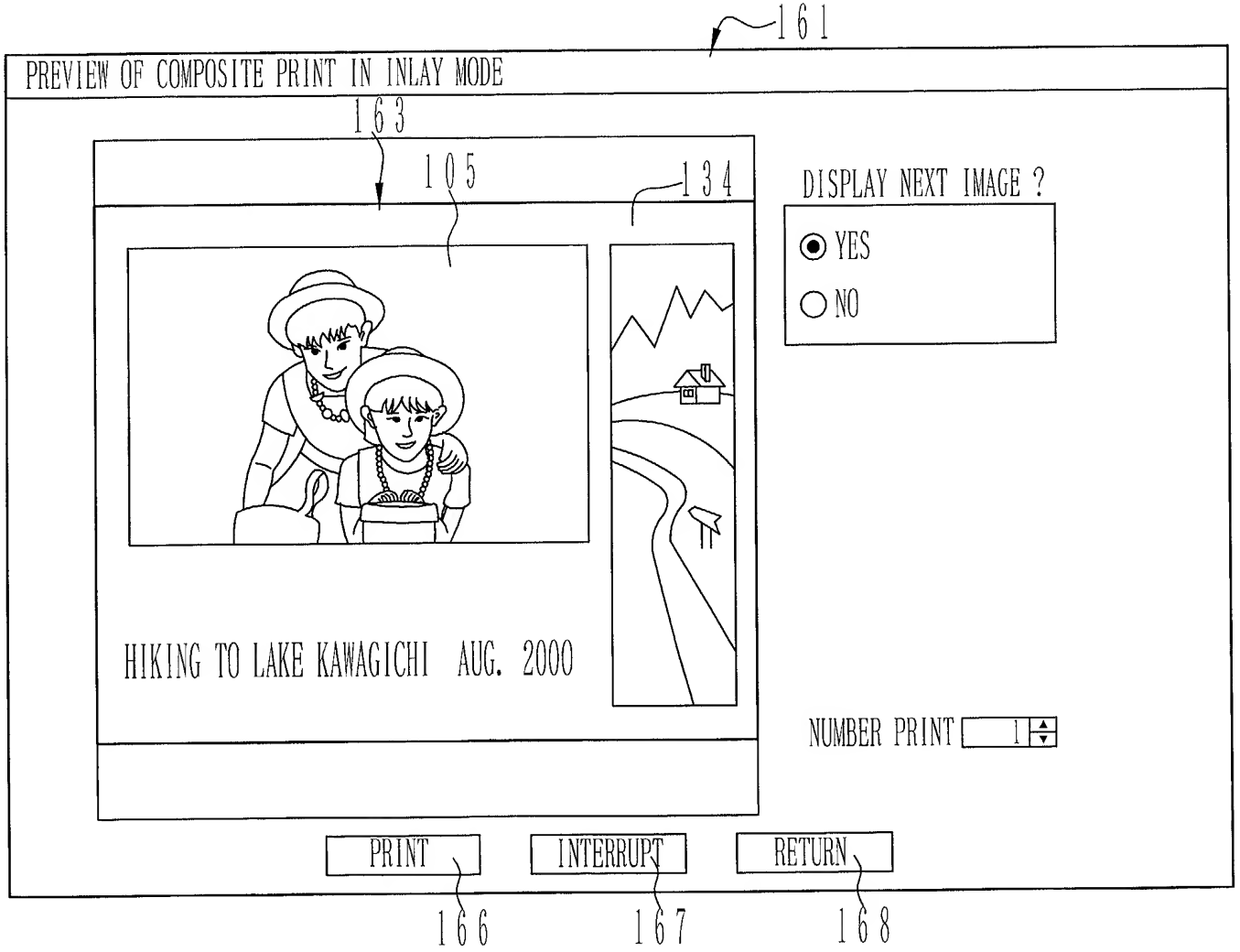
161
PREVIEW OF COMPOSITE PRINT IN INLAY MODE
163
105
134
DISPLAY NEXT IMAGE ?
YES
NO
HIKING TO LAKE KAWAGICHI AUG. 2000
NUMBER PRINT
1
PRINT
INTERRUPT
RETURN
166
167
168

FIG.19

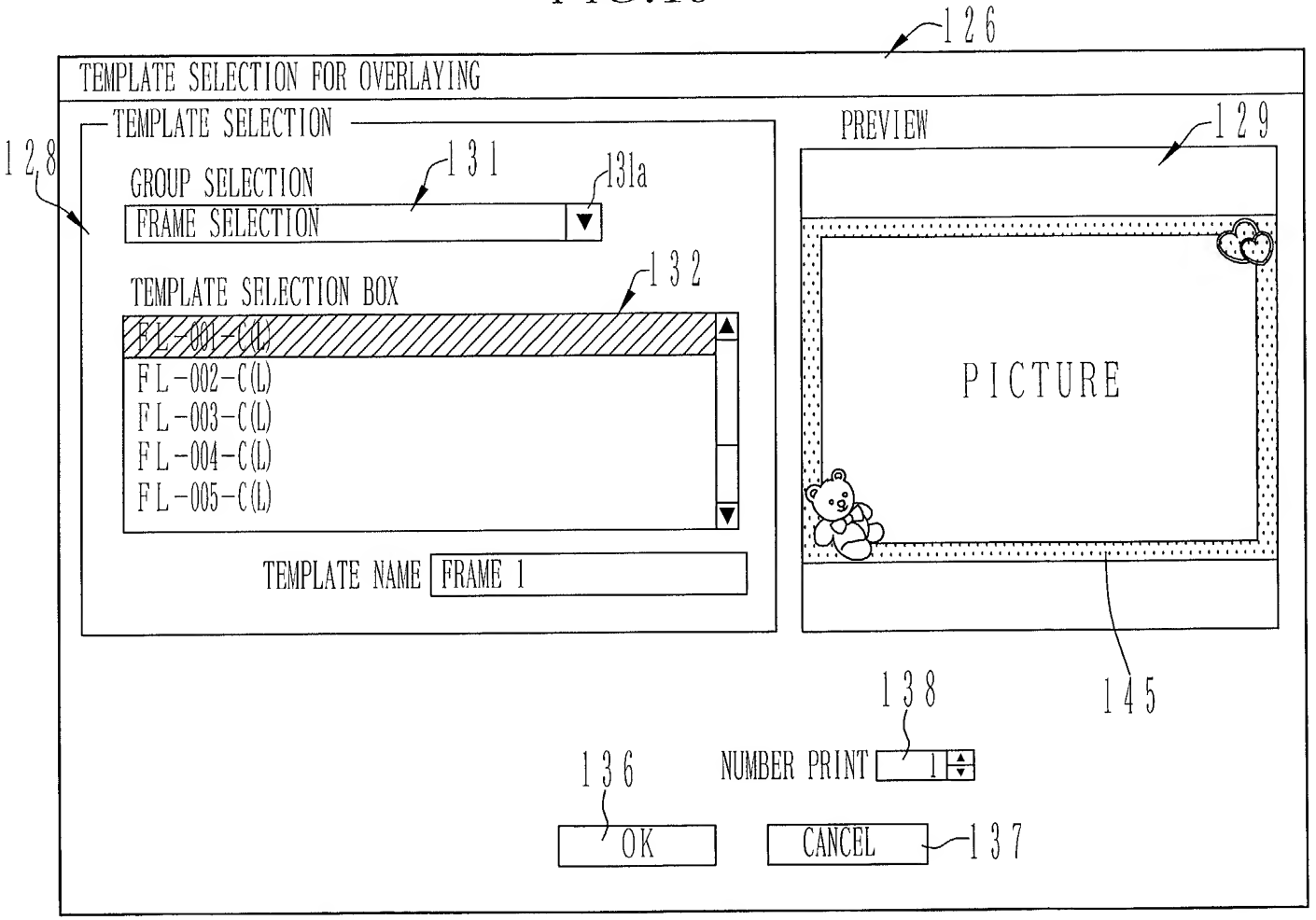
126
TEMPLATE SELECTION FOR OVERLAYING
TEMPLATE SELECTION
128
GROUP SELECTION
131
131a
FRAME SELECTION
TEMPLATE SELECTION BOX
132
FL-001-C(L)
FL-002-C(L)
FL-003-C(L)
FL-004-C(L)
FL-005-C(L)
TEMPLATE NAME
FRAME 1
PREVIEW
129
PICTURE
145
138
NUMBER PRINT
1
136
OK
CANCEL
137

FIG.20

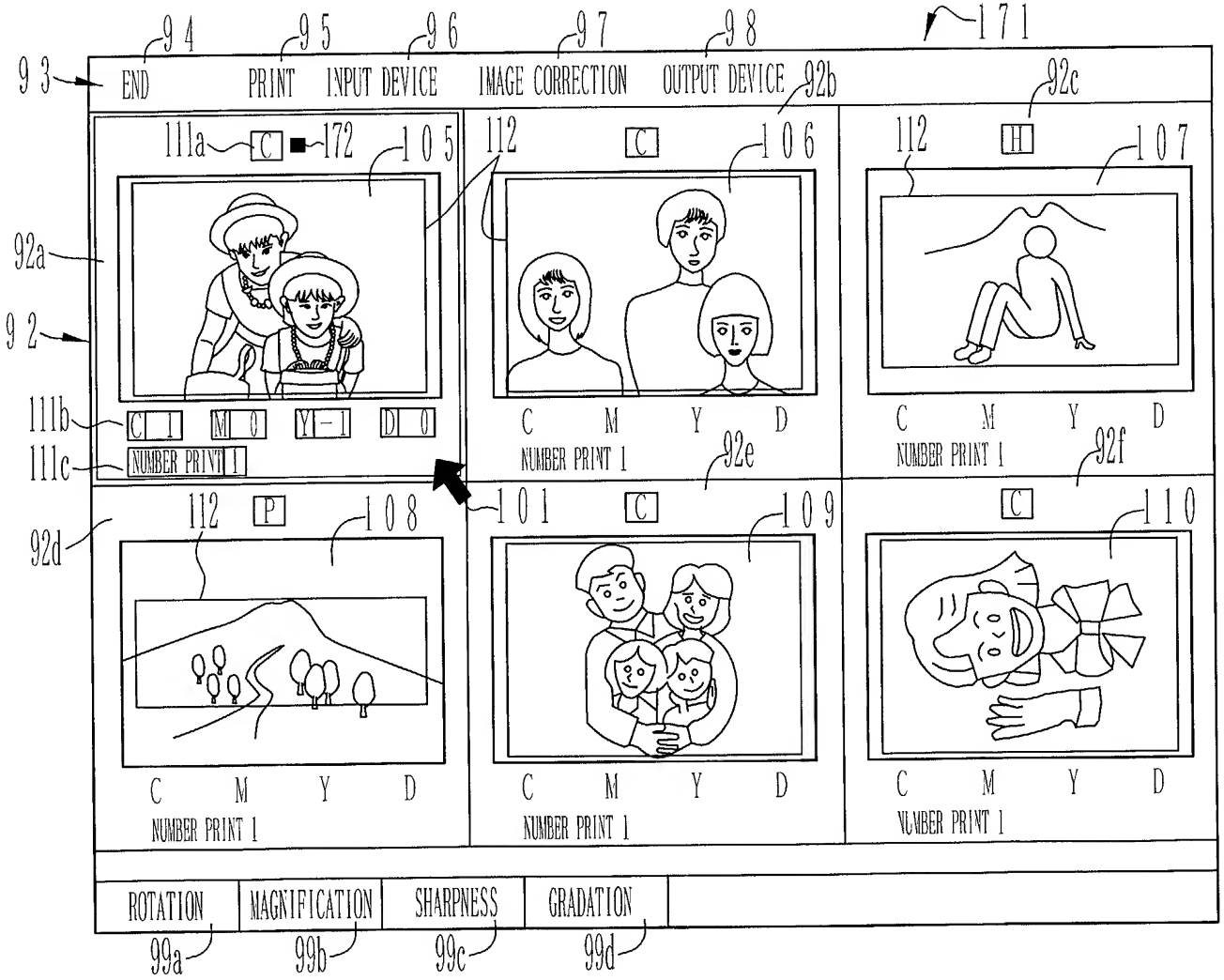
94
95
96
97
98
171
93
END
PRINT
INPUT DEVICE
IMAGE CORRECTION
OUTPUT DEVICE
92b
92c
111a
C
172
105
112
C
106
112
H
107
92a
92
111b
C 1
M 0
Y -1
D 0
C M Y D
NUMBER PRINT 1
111c
NUMBER PRINT 1
92e
92f
112
P
108
101
C
109
C
110
92d
C M Y D
NUMBER PRINT 1
ROTATION
MAGNIFICATION
SHARPNESS
GRADATION
99a
99b
99c
99d

FIG.21

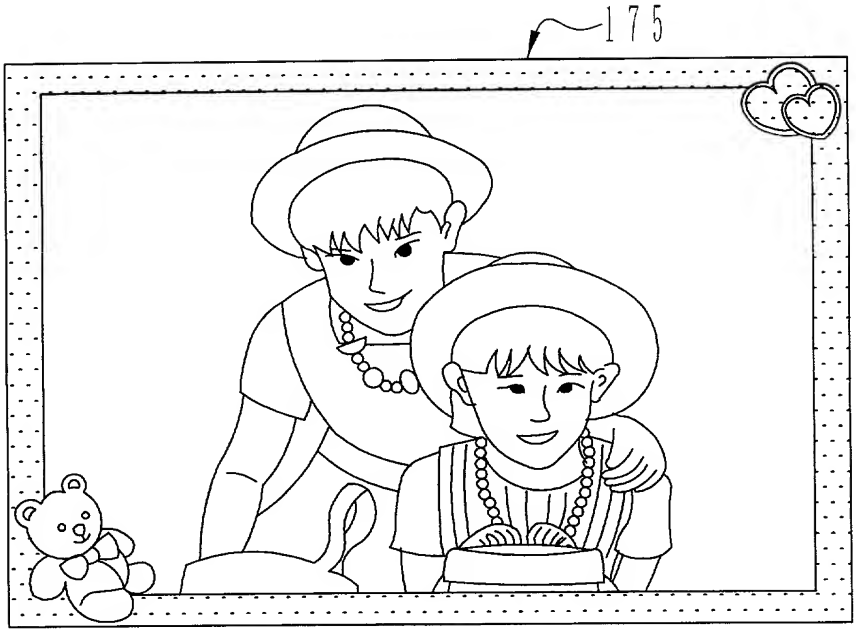

FIG.22A

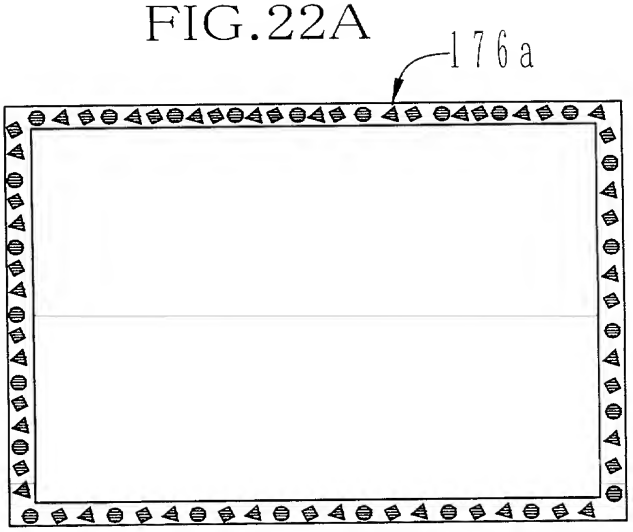

FIG.22B

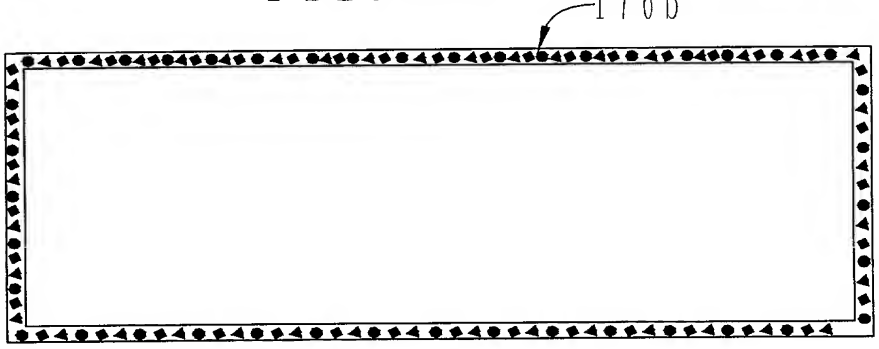

FIG.22C

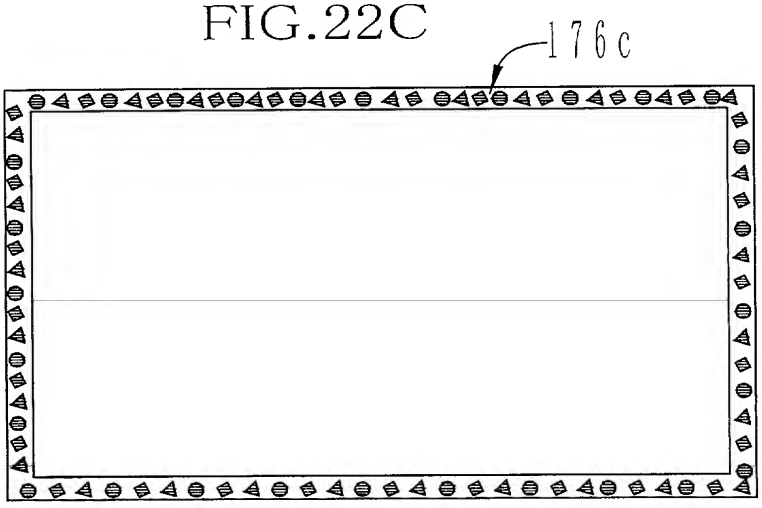

FIG.23

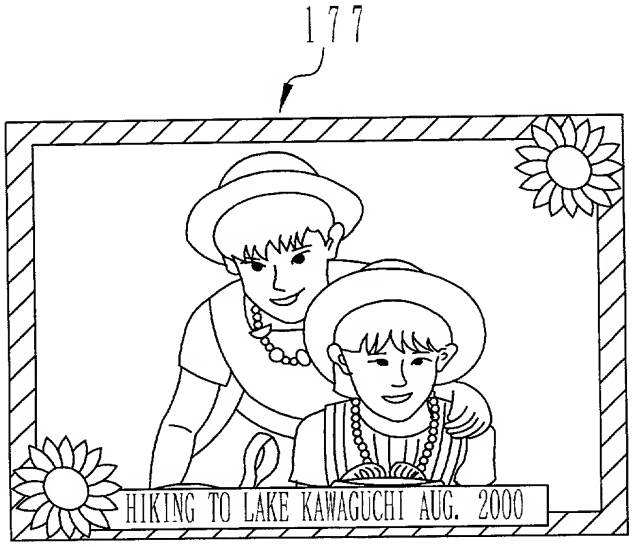
177
HIKING TO LAKE KAWAGUCHI AUG. 2000

FIG.24

178
HIKING TO LAKE KAWAGUCHI AUG. 2000

FIG.25

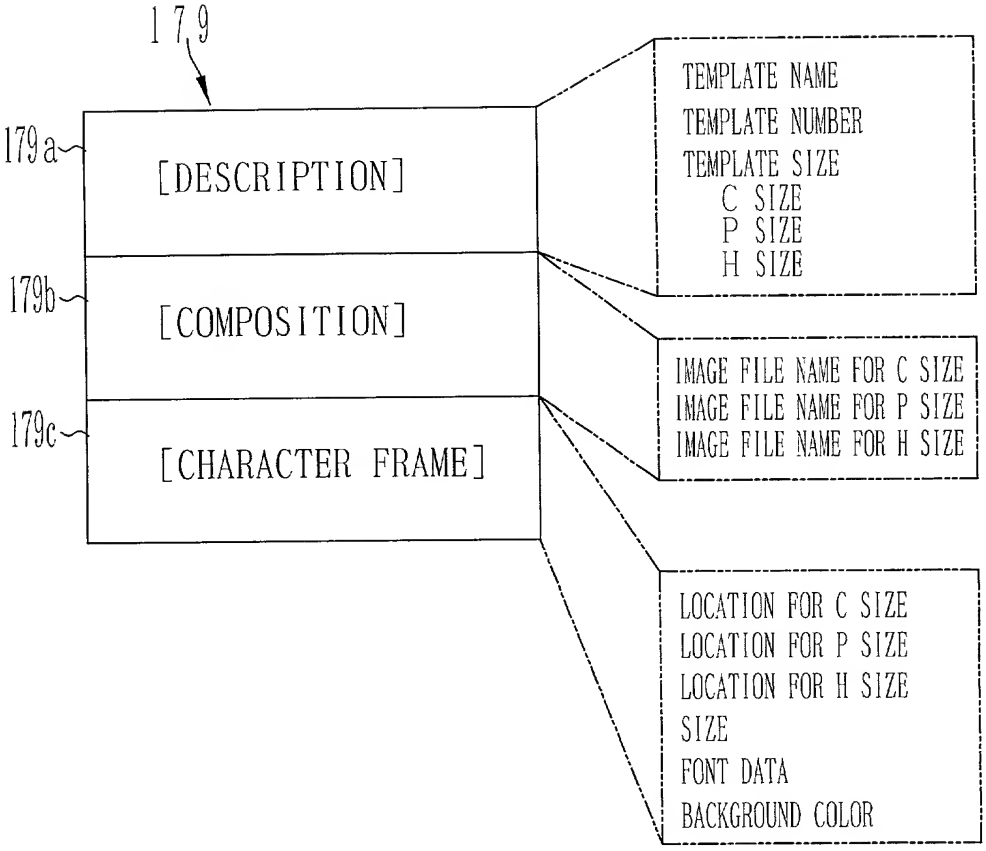

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FIG.26

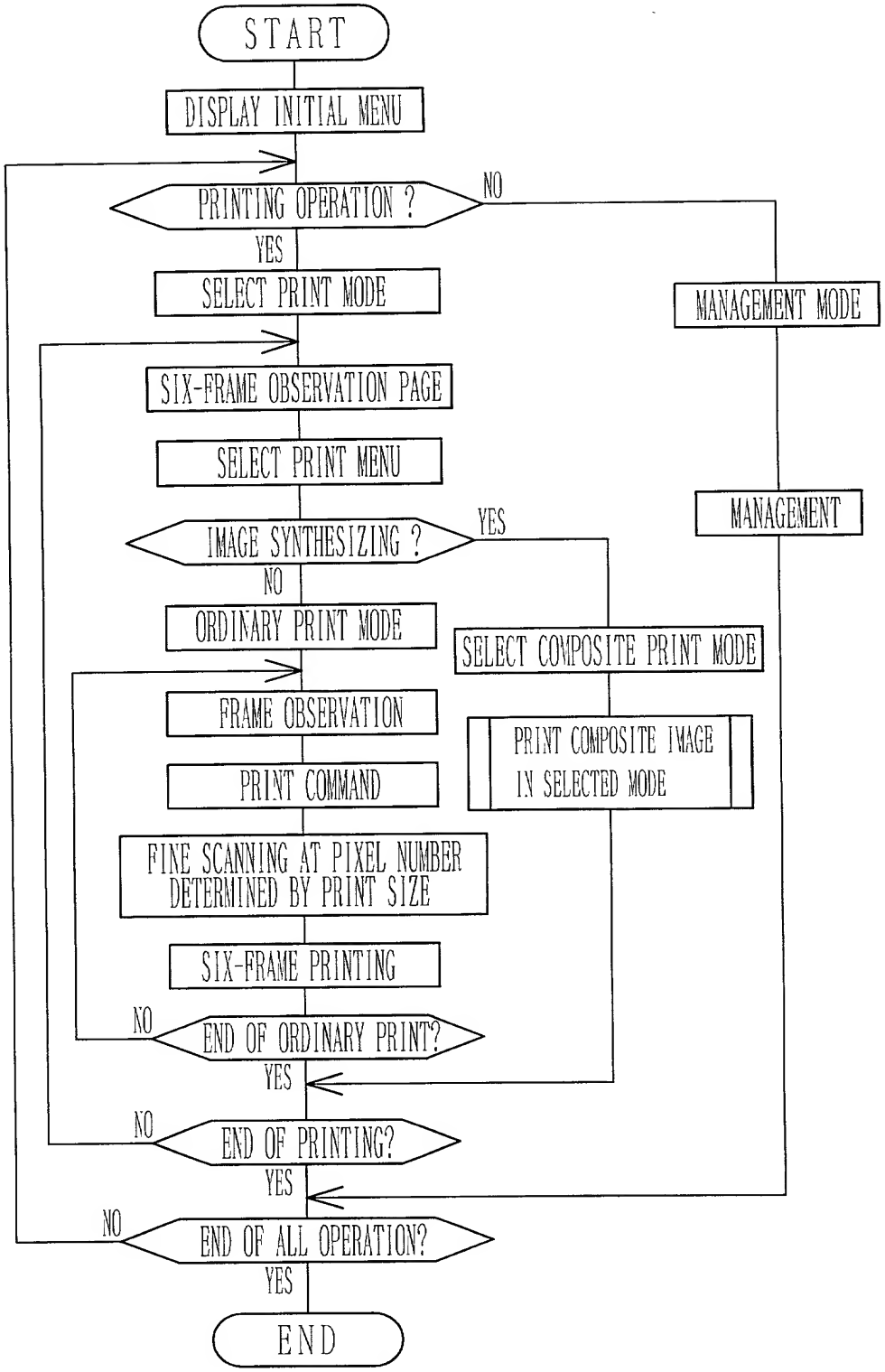
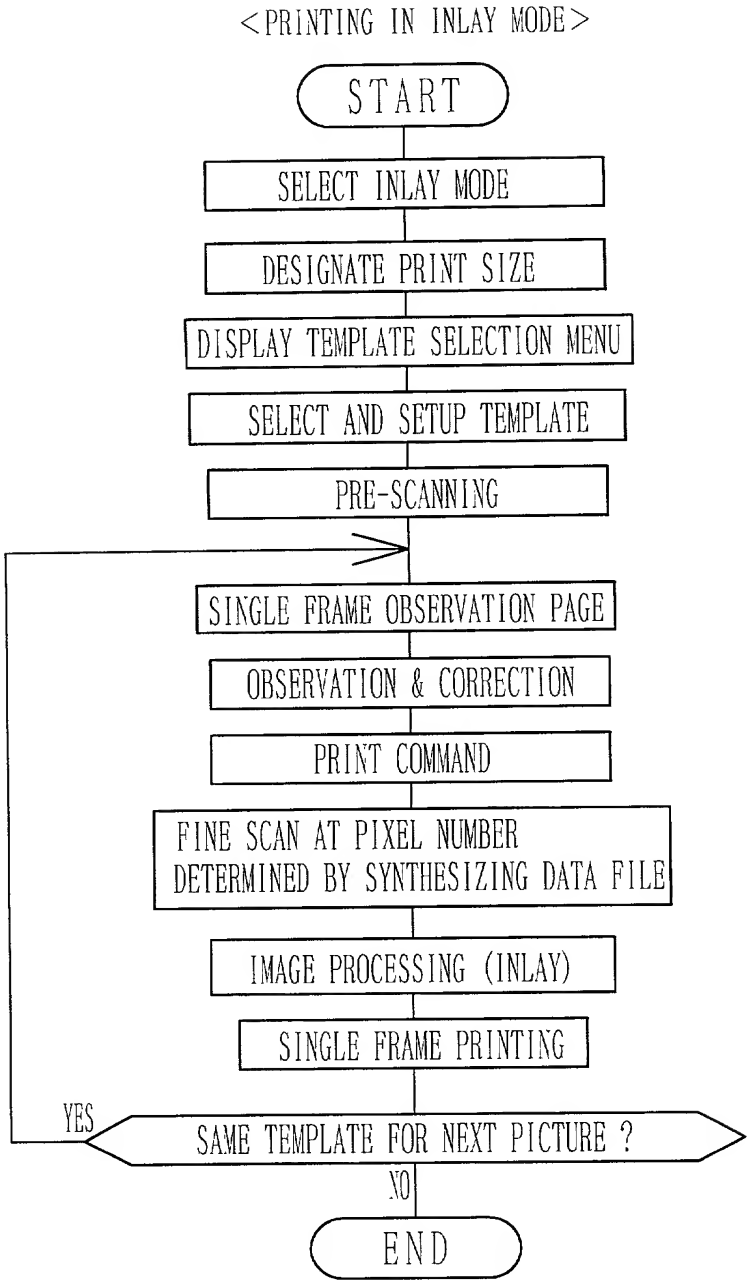
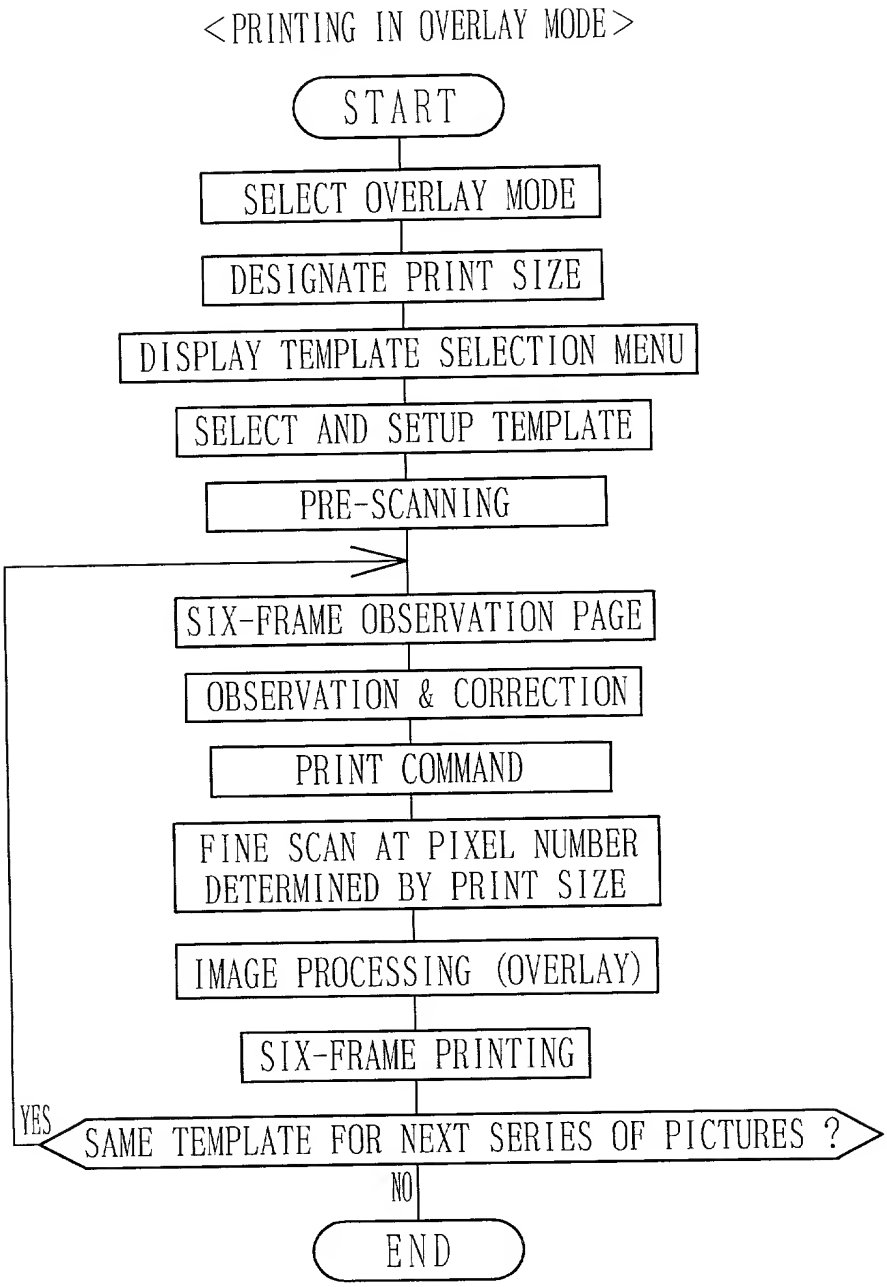

START
DISPLAY INITIAL MENU
PRINTING OPERATION ?
NO
YES
SELECT PRINT MODE
MANAGEMENT MODE
SIX-FRAME OBSERVATION PAGE
SELECT PRINT MENU
MANAGEMENT
IMAGE SYNTHESIZING ?
YES
NO
ORDINARY PRINT MODE
SELECT COMPOSITE PRINT MODE
FRAME OBSERVATION
PRINT COMPOSITE IMAGE IN SELECTED MODE
PRINT COMMAND
FINE SCANNING AT PIXEL NUMBER DETERMINED BY PRINT SIZE
SIX-FRAME PRINTING
NO
END OF ORDINARY PRINT?
YES
NO
END OF PRINTING?
YES
NO
END OF ALL OPERATION?
YES
END

FIG.27



EP 0 696 015 A2

FIG.28



EP0509760A2

FIG.29

<IMAGE PROCESSING (INLAY)>

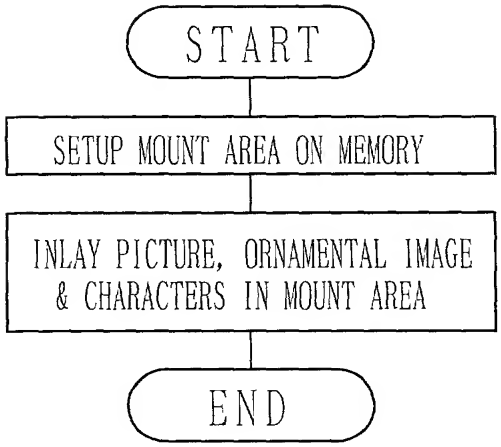
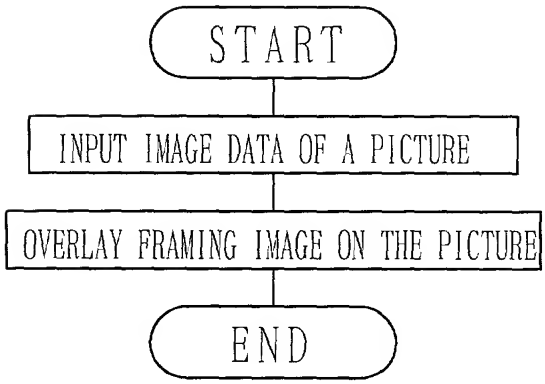


FIG.30

<IMAGE PROCESSING (OVERLAY)>



EP 0 945 825 A2

FIG.31

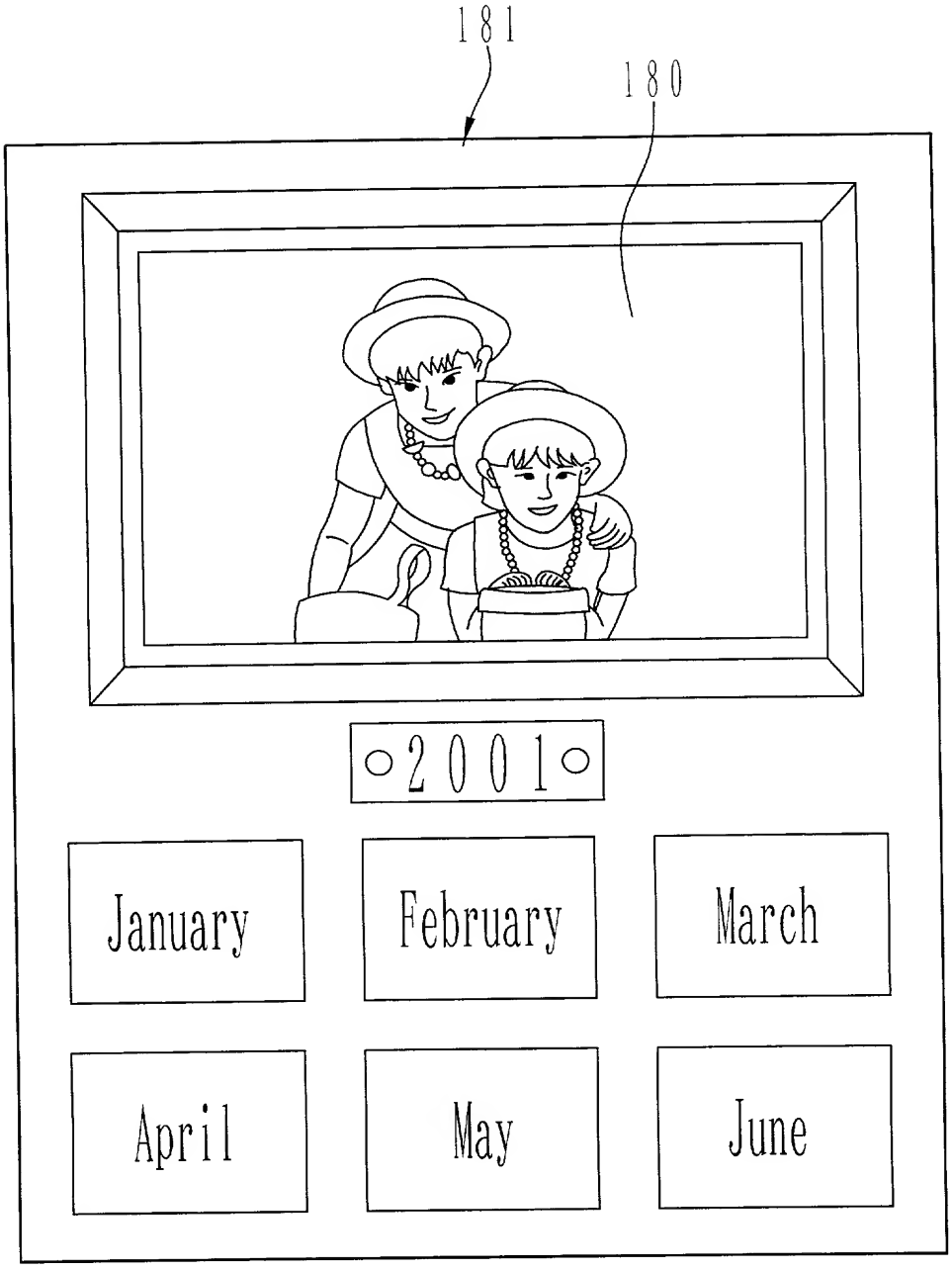


FIG.32

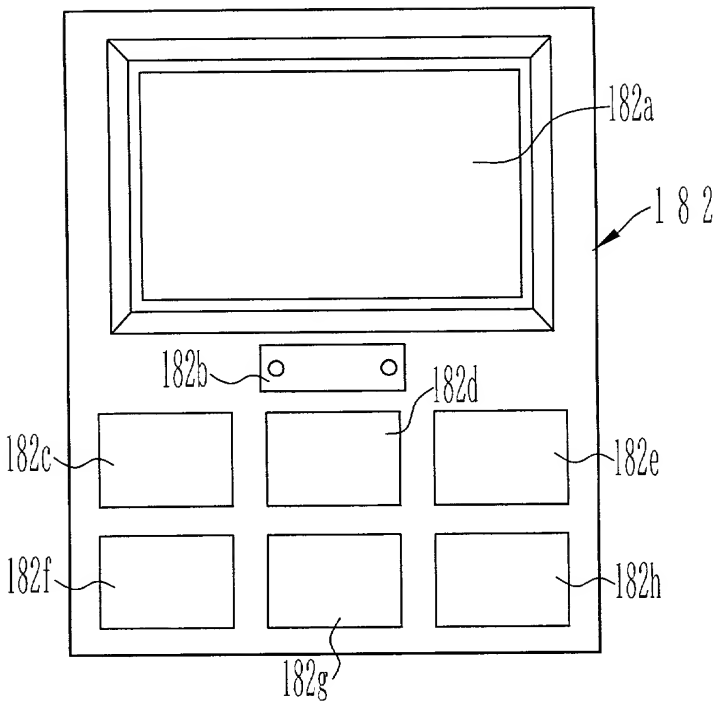


FIG.33

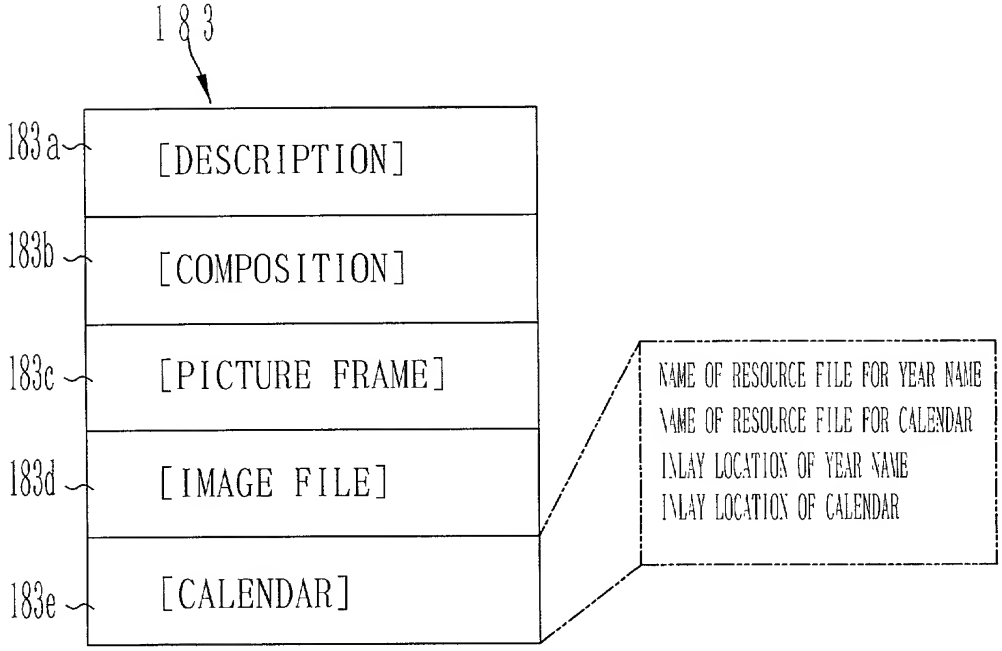


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FIG.34

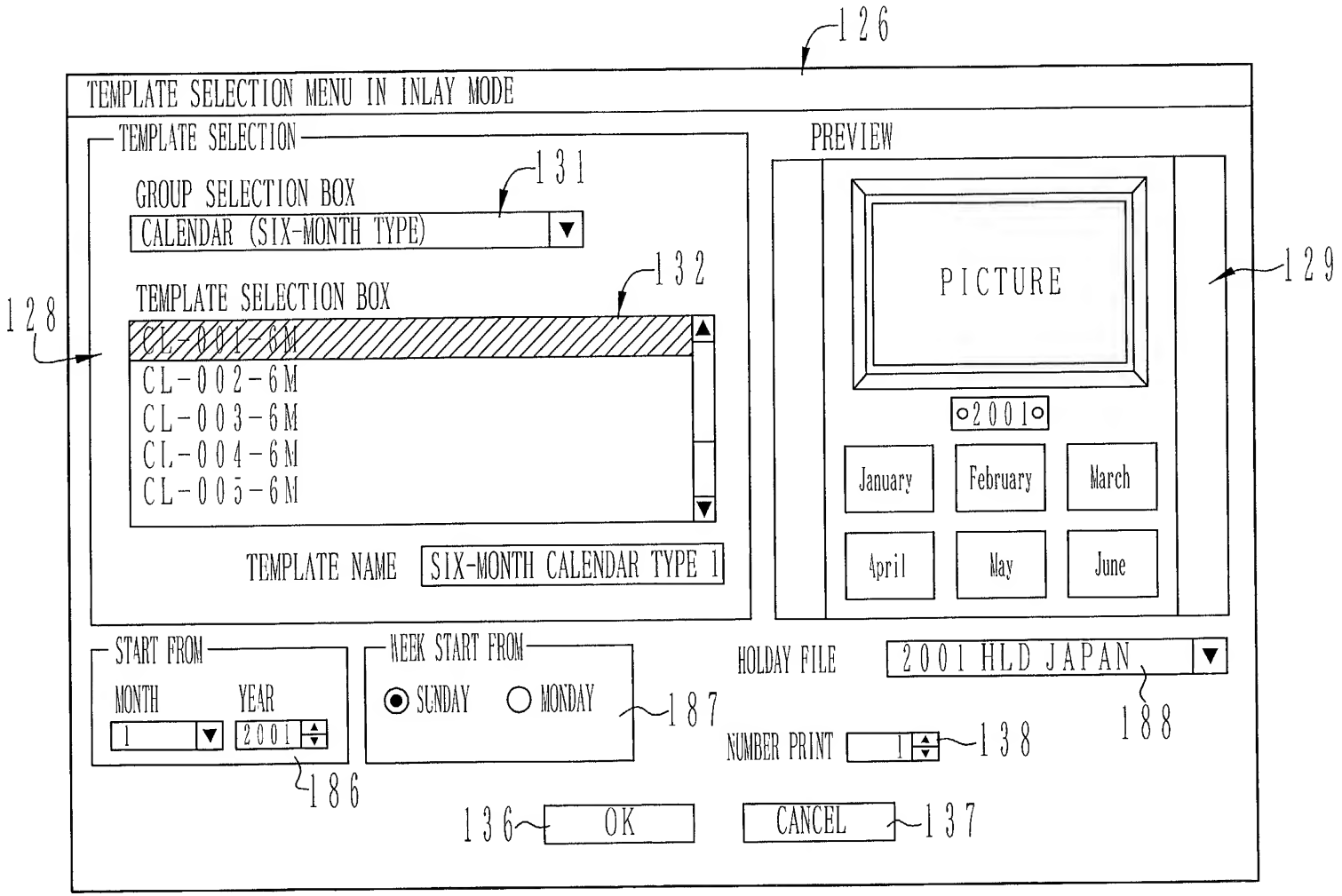

126
TEMPLATE SELECTION MENU IN INLAY MODE
TEMPLATE SELECTION
GROUP SELECTION BOX
131
CALENDAR (SIX-MONTH TYPE)
TEMPLATE SELECTION BOX
132
128
CL-001-6M
CL-002-6M
CL-003-6M
CL-004-6M
CL-005-6M
TEMPLATE NAME
SIX-MONTH CALENDAR TYPE 1
PREVIEW
PICTURE
129
2001
January
February
March
April
May
June
START FROM
MONTH
YEAR
1
2001
186
WEEK START FROM
SUNDAY
MONDAY
187
HOLDAY FILE
2001 HLD JAPAN
188
NUMBER PRINT
1
138
136
OK
CANCEL
137

FIG.35

FIG.36

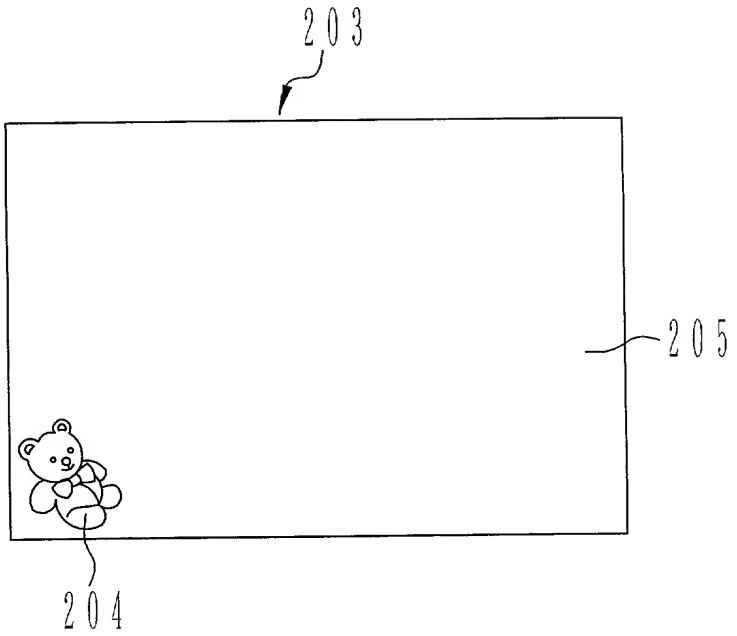
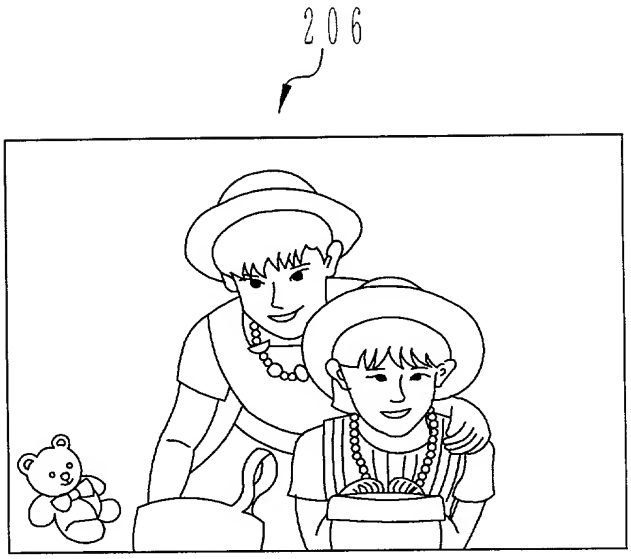


FIG.37



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